AMENDMENTS TO THE CLAIMS

Claim 1 (Canceled)

Claim 2 (Original)   A fuel injection control method comprising the steps of:

starting driving of a fuel injection solenoid;

detecting an actual current integral of a coil current that flows through the solenoid after starting the driving of the solenoid;

comparing the actual current integral with a reference current integral beforehand set in relation to a driving pulse width for the solenoid corresponding to a required fuel injection amount; and

correcting the driving pulse width for the solenoid based on comparison between the actual current integral and the reference current integral,

wherein the driving of the solenoid is controlled based on the driving pulse width corrected.

Claim 3 (Original)   A fuel injection control method comprising the steps of:

starting driving of a fuel injection solenoid;

detecting an actual current integral of a coil current that flows through the solenoid after starting the driving of the solenoid;

comparing the actual current integral with a reference current integral beforehand set in relation to a driving pulse width for the solenoid corresponding to a required fuel injection amount; and

halting the driving of the solenoid at the time the actual current integral reaches the reference current integral.

Claim 4 (Original)   A fuel injection control method comprising the steps of:

starting driving of a fuel injection solenoid;

detecting an actual current integral of a coil current that flows through the solenoid after starting the driving of the solenoid;

comparing the actual current integral with a target current integral beforehand set in relation to a required fuel injection amount; and

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correcting a driving pulse width for the solenoid based on comparison between the actual current integral and the target current integral,

wherein the driving of the solenoid is controlled based on the driving pulse width corrected.

Claim 5 (Original)   A fuel injection control method comprising the steps of:

starting driving of a fuel injection solenoid;

detecting an actual current integral of a coil current that flows through the solenoid after starting the driving of the solenoid;

comparing the actual current integral with a target current integral beforehand set in relation to a required fuel injection amount; and

halting the driving of the solenoid at the time the actual current integral reaches the target current integral.

Claim 6 (Original)   A fuel injection control method comprising the steps of:

starting driving of a fuel injection solenoid;

detecting an actual current integral of a coil current that flows through the solenoid after starting the driving of the solenoid;

calculating an estimated fuel injection amount corresponding to the actual current integral;

comparing the estimated fuel injection amount with a required fuel injection amount; and

correcting a driving pulse width for the solenoid based on comparison between the estimated fuel injection amount and the required fuel injection amount,

wherein the driving of the solenoid is controlled based on the driving pulse width corrected.

Claim 7 (Original)   A fuel injection control method comprising the steps of:

starting driving of a fuel injection solenoid;

detecting an actual current integral of a coil current that flows through the solenoid after starting the driving of the solenoid;

calculating an estimated fuel injection amount corresponding to the actual current integral;

comparing the estimated fuel injection amount with a required fuel injection amount; and

halting the driving of the solenoid at the time the estimated fuel injection amount reaches the required fuel injection amount.

Claim 8 (Currently Amended)   The fuel injection control method according to ~~any one of claims 1 to 7~~ claim 2, further comprising the step of:

resetting the actual current integral every driving cycle of the fuel injection solenoid.

Claim 9 (Canceled)

Claim 10 (Currently Amended)   A fuel injection control apparatus comprising:

        driving means for driving a fuel injection solenoid;

        detecting means for detecting an actual current integral of a coil current flowing through the solenoid; and

        control means for controlling driving of the solenoid based on the actual current integral, ~~The fuel injection control apparatus according to claim 9,~~ wherein the control means comprises:

comparing means for comparing the actual current integral obtained after starting driving of the solenoid detected in the detecting means with a reference current integral beforehand set in relation to a driving pulse width for the solenoid corresponding to a required fuel injection amount; and

correcting means for correcting the driving pulse width for the solenoid based on a result of comparison in the comparing means.

Claim 11 (Currently Amended)   The fuel injection control apparatus according to claim ~~9~~ 10, wherein the control means comprises comparing means for comparing the actual current integral obtained after starting driving of the solenoid detected in the

detecting means with a reference current integral beforehand set in relation to a driving pulse width for the solenoid corresponding to a required fuel injection amount, and halts the driving of the solenoid by the driving means at the time the actual current integral reaches the reference current integral.

Claim 12 (Currently Amended)   The fuel injection control apparatus according to claim 9 10, wherein the control means comprises:

comparing means for comparing the actual current integral obtained after starting driving of the solenoid detected in the detecting means with a target current integral beforehand set in relation to a required fuel injection amount; and

correcting means for correcting a driving pulse width for the solenoid based on comparison between the actual current integral and the target current integral.

Claim 13 (Currently Amended)   The fuel injection control apparatus according to claim 9 10, wherein the control means comprises comparing means for comparing the actual current integral obtained after starting driving of the solenoid detected in the detecting means with a target current integral beforehand set in relation to a required fuel injection amount, and halts the driving of the solenoid by the driving means at the time the actual current integral reaches the target current integral.

Claim 14 (Currently Amended)   The fuel injection control apparatus according to claim 9 10, wherein the control means comprising:

calculating means for calculating an estimated fuel injection amount corresponding to the actual current integral obtained after starting driving of the solenoid;

comparing means for comparing the estimated fuel injection amount with a required fuel injection amount; and

correcting means for correcting a driving pulse width for the solenoid based on comparison between the estimated fuel injection amount and the required fuel injection amount.

Claim 15 (Currently Amended)   The fuel injection control apparatus according to claim ~~9~~ 10, wherein the control means comprises:

calculating means for calculating an estimated fuel injection amount corresponding to the actual current integral obtained after starting driving of the solenoid; and

comparing means for comparing the estimated fuel injection amount with a required fuel injection amount,

and halts the driving of the solenoid by the driving means at the time the estimated fuel injection amount reaches the required fuel injection amount.

Claim 16 (Currently Amended)   The fuel injection control apparatus according to claim ~~9~~ 10, wherein the detecting means for detecting the actual current integral is an analog detecting circuit that detects a cumulative current value of the coil current or a digital detecting circuit that measures a value of the coil current at predetermined intervals to calculate.

Claim 17 (New)   The fuel injection control method according to claim 3, further comprising the step of:

resetting the actual current integral every driving cycle of the fuel injection solenoid.

Claim 18 (New)   The fuel injection control method according to claim 4, further comprising the step of:

resetting the actual current integral every driving cycle of the fuel injection solenoid.

Claim 19 (New)   The fuel injection control method according to claim 5, further comprising the step of:

resetting the actual current integral every driving cycle of the fuel injection solenoid.

Claim 20 (New)   The fuel injection control method according to claim 6, further comprising the step of:

resetting the actual current integral every driving cycle of the fuel injection solenoid.

Claim 21 (New)   The fuel injection control method according to claim 7, further comprising the step of:

resetting the actual current integral every driving cycle of the fuel injection solenoid.